small dorsal and ventral lips. Cuticle thick, with transverse striations, bearing in the oesophageal region of the body a number of rounded or oval cuticular plaques arranged in three longitudinal rows on the dorsal and ventral parts. Cervical alae symmetrical and relatively broad, extending anteriorly to within 0.31 mm. of the extremity.

The pharynx is very short, measuring 0.049 mm. in length. The muscular portion of the oesophagus measures 0.74–0.8 mm. in length by 0.04 mm. in breadth. We cannot distinguish the posterior glandular portion of this organ. Nervous ring 0.52 mm. from the anterior extremity.

The vulva is situated towards the posterior extremity, 4.2 mm. from the tip of the tail. The short muscular ovejector is directed anteriorly. The uterus is entirely full of numerous little eggs; coils of uterine complex extending near the anus. The anus is situated 0.22–0.24 mm. from the very blunt posterior extremity.

Host.—*Didelphys aurita* Wied.

Location.—Mucous membrane of the oesophagus.

Geographic distribution.—S. Paulo, Brazil.

Allotypes.—Instituto Biologico de S. Paulo helminthological collection No. 1220.

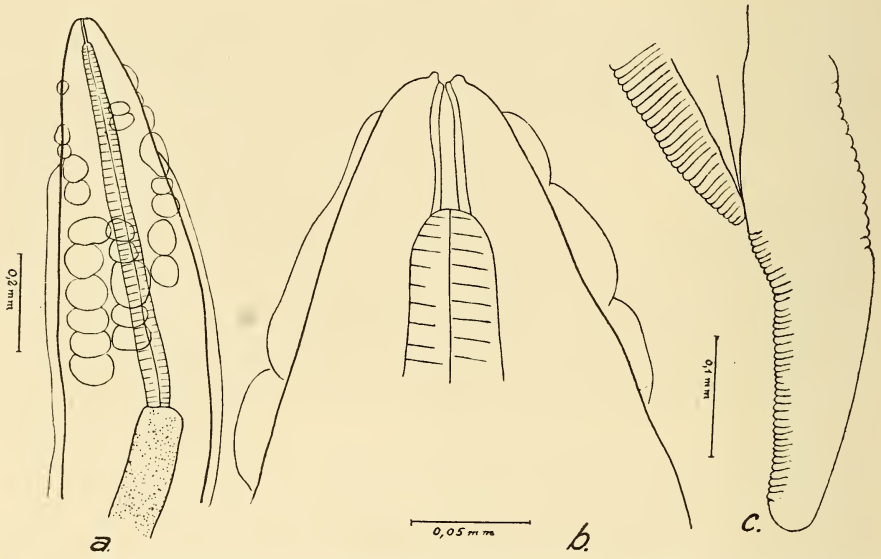

Fig. 2.—*Gongylonema marsupialis*. *a* and *b*, anterior end; *c*, posterior end of female.

ZOOLOGY.—*An annotation on the nematode genus* Pontonema *Leidy 1855.*[1]

N. A. Cobb and G. Steiner, Bureau of Plant Industry.

Joseph Leidy described in 1855 and again in 1856 a new genus of free-living nematodes which he called *Pontonema*, and to which he re-

[1] The figures for this paper were prepared by Josephine F. Danforth and Florence M. Albin, and technical assistance was given by Edna M. Buhrer, all of the Division of Nematology, Bureau of Plant Industry. Received October 21, 1933.

ferred two species, *P. vacillatum* and *P. marinum*. Unfortunately Leidy's incomplete characterization of the genus and the two species did not allow later observers to recognize or place them properly. In 1927 a revision of the nematodes still available in Leidy's various collections was published by Walton. In this revision *Pontonema vacillatum* was referred to the genus *Oncholaimus* Dujardin and the species redescribed; *P. marinum* was transferred to *Enoplus*. About that same time, the senior author, in connection with investigations on nematodes from the New England coast, found it desirable to determine, if possible, the exact standing of the two forms.

From the redescription by Walton (4) it may well be seen that *Pontonema vacillatum* belongs to the Oncholaims but its membership in the genus *Oncholaimus* proper seems doubtful. As to *Enoplus marinus* as redescribed by Walton a more detailed characterization also seemed necessary to properly differentiate the form from other species. Such a revision was made possible through the courtesy of Dr. J. Percy Moore of the University of Pennsylvania, to whom we express our thanks.

THE GENUS PONTONEMA LEIDY 1855 (=PARONCHOLAIMUS FILIPJEV 1916)

Reexamination of the type material collected by Leidy proved that *Pontonema vacillatum* belongs to the genus *Paroncholaimus* Filipjev 1916. The latter genus is therefore a synonym of *Pontonema* which is now reestablished and *diagnosed* as follows:

Oncholaiminae with an anterior circle of six papillae and a posterior circle of ten short setae on the head, with three teeth in the buccal cavity, the two subventral ones of symmetrical position, equal size, and both larger than the dorsal one. Buccal cavity of strict dorso-ventral symmetry. Tail short, obtuse, curved. Female apparatus amphidelphic. Gubernaculum well developed.

Type: *Pontonema vacillatum* Leidy 1855.[2]

REDESCRIPTION OF PONTONEMA VACILLATUM LEIDY 1855

The body tapers slightly toward the head end; the tail of both sexes is short and obtuse, (fig. 1c, e, f) somewhat digitate in the male. The smooth, transparent cuticle is 6–7μ thick. There are six flap-like lips, each with a papilla at its base (fig. 1a). In addition there are ten short cephalic setae, of which one occurs in each lateral and two in each submedial sector. Short somatic setae also occur in longitudinal series in the oesophageal region of the body. The inconspicuous amphids are situated opposite the point of the dorsal tooth.

The buccal cavity is of typical shape, about 38–43μ wide and 75–85μ long, and the three teeth are placed as shown in fig. 1d. As in related forms the

[2] *Paroncholaimus vulgaris* (Bastian 1865) was declared type of the genus by Filipjev in 1916.

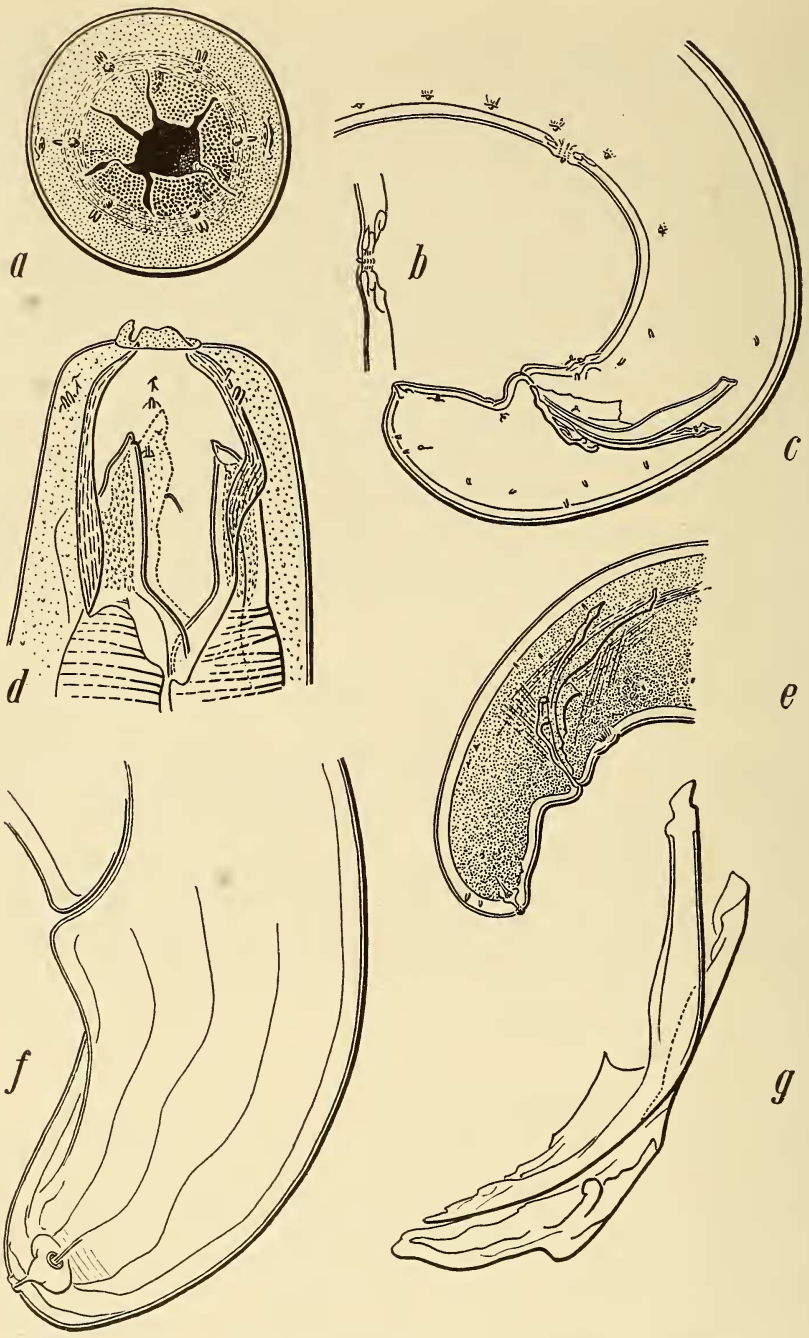

Fig. 1.—*Pontonema vacillatum* Leidy 1855 *a*.—Top view of head. ×515. *b*.—Detail of male ventro-median supplement, *c*.—Tail of male. ×235. *d*.—Lateral view of head of female. ×515. *e*.—Tail of male. ×235. *f*.—Tail of female showing spinneret. ×515. *g*.—Detail of spicula and gubernaculum.

oesophagus is of cylindrical shape, increasing somewhat posteriad in diameter. It is surrounded by the nerve-ring at about 0.5–0.6 mm. from the anterior end. The position of the caudal glands was not made out, but is undoubtedly preanal, as in other members of the group; their outlet, the spinneret, is very minute (fig. 1e, f).

The excretory pore opens about four and one-half times the length of the buccal cavity behind the head end.

The female apparatus is amphidelphic, with a larger posterior branch. This inequality in the size of the two branches is especially noticeable by the number of smooth, thin shelled eggs in the two uteri, the anterior containing up to eleven, the posterior up to twenty-four. These eggs are oval, measure $45\times55\mu$ and are apparently deposited unsegmented. The ovaries are reflexed.

In the male, the spicula are quite slender and of much simpler form than the gubernaculum, which, as shown in fig. 1g, is of complicated structure and almost as long as the spicula themselves. A pair of large preanal papillae is located a short distance anteriad of the anus, and farther forward, at about twice the spicula length in front of the anus, a ventromedian supplement is present (fig. 1c and fig. 1b). A number of papillate structures is furthermore spread over the male tail and also as a preanal ventrosubmedial series (fig. 1c).

$$\text{♀}\ \frac{.57\quad ?\quad 7.7\quad {}^{20}/_{51}.{}^{/27}\ 99.2}{.54\quad ?\quad .83\qquad .98\ .59}\ 16.3\text{ mm.}$$

$$\text{♂}\ \frac{.47\quad ?\quad 8.5\quad M\ 99.2}{.43\quad ?\quad .94\ 1.3\quad .77}\ 15.25\text{ mm.}$$

Habitat.—Kennebunk Port, Maine.

Diagnosis.—*Pontonema* with the tail slightly longer than the anal body diameter with very short cephalic setae, with amphids opposite the point of the dorsal tooth, with the excretory pore at about four and one-half times the length of the buccal cavity behind the anterior end, with a longer posterior branch of the amphidelphic female apparatus; with gubernacula only slightly smaller in size than the spicula and also in the male with a pair of slightly submedial papillae in front of the anus.

REDESCRIPTION OF ENOPLUS MARINUS (LEIDY 1855) WALTON 1927

The cuticle is thin, measuring on the head only 5.5μ, in the oesophageal region 8μ. It is traversed by fine transverse striae. The head is set off by a fine line, a suture, as in other Enoplids, about two-thirds head-width back. There are ten cephalic setae—one in each lateral and two in each submedial sector. The latter are of unequal size, the longer one measuring about 22μ, its companion being about one-third shorter. A few short, small setae are scattered in the oesophageal region and on the tail. Around the oral opening six lips are seen, obscurely grouped in pairs. Each of the lips bears a mammiform papilla. In the buccal cavity the three equal, yellowish, slightly arcuate mandibles of 35μ length have their normal position, one dorsal and one in each ventro-submedial sector. Each mandible, 35μ long, has two slightly retrorse, distinctly separated prongs. Anteriorly each mandible is about 16μ

wide but tapers posteriorly rather regularly to its blunt end which is exactly opposite the aforementioned encircling suture. The lip region is supported by a refractive transverse triangular framework, serving for the attachment of the powerful buccal muscles. The small amphids occur a short distance behind the lateral setae; their ellipsoidal, transverse openings are about 12μ long. Their opening leads into a pouch-like structure behind which follows a fusiform cavity containing the sensilla.

As in other Enopli the three oesophageal glands empty near the base of the mandibles into the alimentary tract. No ocelli or pigment spots were seen on the oesophagus, but long preservation of the material may have caused their disappearance.

Behind the buccal cavity the oesophagus is about three-fifths, at the nerve-ring about one-half and at the base again three-fifths as wide as the corresponding portion of the body. The lateral chords opposite the middle of the oesophagus are about one-third as wide as the body, whereas in the middle of the nematode they seem to be more nearly half the corresponding body width. The number of cells making up the intestine in a cross section is estimated to be about 20; a few scattered intestinal cells are considerably larger than the rest. The rectum is about as long as the anal body diameter. The base of the tail tapers conically and thence onward it may be said to be subcylindroid in the posterior two-fifths, although the terminus is slightly

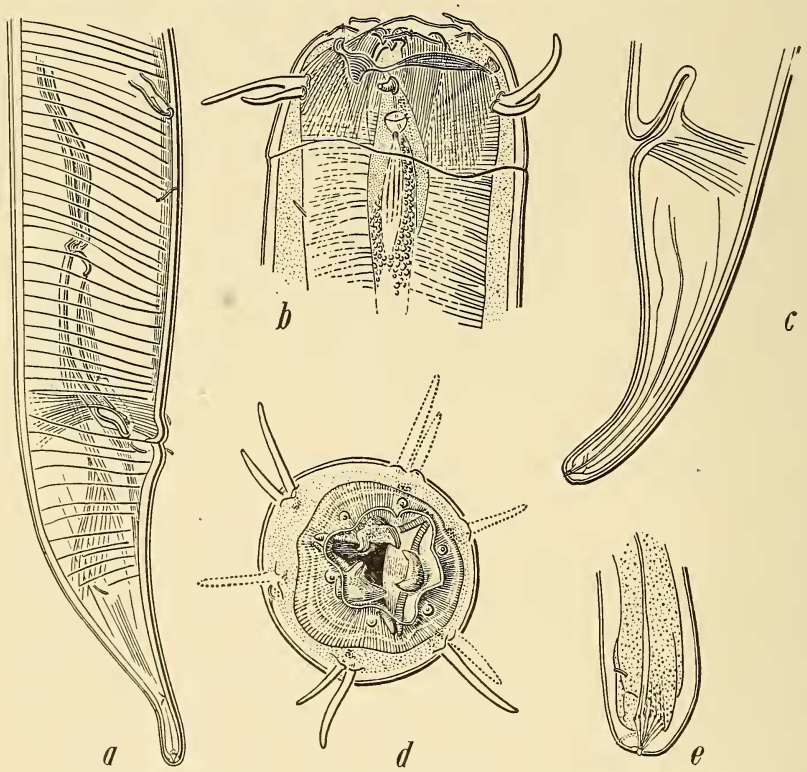

Fig. 2.—*Enoplus marinus* (Leidy 1855) Walton 1927 *a*.—Tail of male. ×170. *b*.—Lateral view of head of male. ×490. *c*.—Tail of female. ×170. *d*.—Top view of head of male. ×380. *e*.—Detail of tail showing spinneret. ×490.

swollen. A spinneret forms the opening of the large tubular outlets of the caudal glands.

The inconspicuous excretory pore is located halfway back to the nerve-ring. Vulva slightly raised, vagina leading in at right angles; female apparatus amphidelphic, ovaries reflexed. Three to four eggs, each about as long as the body is wide and two-thirds as wide as long, are contained in each uterus. The egg shell (1–2μ thick) seems to be smooth.

The male has two equal, rather flatly arcuate spicula, about two-thirds as long as the tail; they taper throughout their length. A double gubernaculum is about one-fourth as long as the spicula and a telamon slightly longer. The single tubular supplement (65×15μ) is located about twice the length of the spicula in front of the anus. Its length is about one-third the corresponding body width and it forms an angle of about 45° with the body axis. About one hundred posteriorly continuous oblique copulatory muscles (about 12μ wide) occur for a distance in front of the anus equal to 2–3 times the length of the tail. A few are located behind the anus.

♀	0.3	4.	10.	$^{18}/_{53}$. $/_{18}$	96.6	8.8 mm.
	1.	1.5	1.6	1.9	1.3	
♂	0.4	5.	12.	M	97.1	8.33 mm.
	0.9	1.4	1.4	2.2	1.4	

Habitat.—Kennebunk Port, Maine, and in oyster bed, Atlantic City, New Jersey.

Diagnosis.—*Enoplus* resembling *E. brevis* Bastian, 1865, but differing from it by larger size (8–9 mm. instead of 4.–5.5 mm. in *E. brevis*), by a slightly shorter tail in the female, by regularly tapering spicula and by a more slender and smaller preanal supplement in the male.

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ZOOLOGY.—*Notes on certain pycnogonids including descriptions of two new species of* Pycnogonum.[1]

Waldo L. Schmitt, U. S. National Museum.

Along with various collections of invertebrates received at the National Museum, there are a number of pycnogonids which seem worthy of record. Included are two apparently new species of *Pycno-*

[1] Published by permission of the Secretary of the Smithsonian Institution. Received November 3, 1933.